Medical Policy

Healthcare Services Department

Policy Name	Policy Number	Scope
Non-Invasive Prenatal Genetic Tests for Fetal Aneuploids	MP-PL-FP-01-23	☐ MMM MA ☒ MMM Multihealth

Service Category

☐ Anesthesia
☐ Surgery
☐ Radiology Procedures
☒ Pathology and Laboratory Procedures
☐ Medicine Services and Procedures
☐ Evaluation and Management Services
☐ DME/Prosthetics or Supplies
☐ Other _____

Service Description

The following information addresses cell-free fetal DNA-based prenatal testing (NIPT) for fetal aneuploidies only.

Noninvasive prenatal testing (NIPT), occasionally called noninvasive prenatal screening (NIPS), is a method of determining the risk that the fetus will be born with certain genetic abnormalities. This testing analyzes small fragments of DNA that are circulating in a pregnant woman's blood. Unlike most DNA, which is found inside a cell's nucleus, these fragments are free-floating and not within cells, and so are called cell-free DNA (cfDNA). These small fragments usually contain fewer than 200 DNA building blocks (base pairs) and arise when cells die off and get broken down and their contents, including DNA, are released into the bloodstream.
During gestation, the mother's bloodstream contains a mix of cfDNA that comes from her cells and cells from the placenta. The placenta is a tissue in the uterus that links the fetus and the mother's blood supply. These cells are shed into the mother's bloodstream throughout gestation. The DNA in placental cells is usually identical to the DNA of the fetus.
Analyzing cfDNA from the placenta provides an opportunity for early detection of certain genetic abnormalities without harming the fetus. NIPT is most often used to look for chromosomal disorders that are caused by the presence of an extra or missing copy (aneuploidy) of a chromosome. NIPT primarily looks for Down syndrome (trisomy 21, caused by an extra chromosome 21), trisomy 18 (caused by an extra chromosome 18), trisomy 13 (caused by an extra chromosome 13), and extra or missing copies of the X chromosome and Y chromosome (the sex chromosomes). The accuracy of the test varies by disorder.
NIPT is considered non-invasive because it requires drawing blood only from the pregnant woman and does not pose any risk to the fetus. NIPT is a screening test, which means that it will not give a definitive answer about whether a fetus has a genetic condition. The test can only estimate whether the risk of having certain conditions is increased or decreased.
In some cases, NIPT results indicate an increased risk for a genetic abnormality when the fetus is unaffected (false positive), or the results indicate a decreased risk for a genetic abnormality when the fetus is affected (false negative). Because NIPT analyses both fetal and maternal cfDNA, the test may detect a genetic condition in the mother. To determine chromosomal aneuploidy, the most common method is to count all cfDNA fragments (both fetal and maternal). If the percentage of cfDNA fragments from each chromosome is as expected, then the fetus has a decreased risk of having a chromosomal condition (negative test result). If the percentage of cfDNA fragments from a particular chromosome is more than expected, then the fetus has an increased likelihood of having a trisomy condition (positive test result). A positive screening result indicates that further testing called diagnostic testing should be performed to confirm the result. It is not necessary to get the NIPT test during pregnancy, it's a personal choice. The health care provider, and a geneticist may discuss in detail all pre natal screening options, the results and all required information to determine next steps.

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Medical Necessity Guidelines

Cell-Free Fetal DNA testing for Aneuploidy testing is considered medically necessary if it meet the following clinical indications for procedure.

1. Genetic counseling is part of the care team that provides information about the test and other diagnostic treatments according to the NIPT results and treatment options.
2. NIPT Cell-free fetal DNA testing may be indicated when ALL the following are present:
    a. Screening for fetal aneuploidy, and ALL the following:
        - Screening performed for 1 or more of the following:
            - Trisomy 21 (Down syndrome)
            - Trisomy 18 (Edwards syndrome)
            - Trisomy 13 (Patau syndrome)
        - Single-gestation pregnancy and 1 or more of the following:
            - Conventional screening tests positive for aneuploidy
            - Prenatal testing to evaluate risk of fetal aneuploidy

    b. Genetic counseling has been performed, as indicated by **ALL** the following:

        - Counseling is provided by healthcare professional with education and training in genetic issues relevant to the genetic tests under consideration.
        - Counselor is free of commercial bias and discloses all (potential and real) financial and intellectual conflicts of interest.
        - Process involves individual or family and is comprised of **ALL** the following:
            - Calculation and communication of genetic risks after obtaining 3-generation family history
            - Discussion of natural history of condition in question, including role of heredity
            - Discussion of possible impacts of testing (e.g., psychological, social, limitations of non-discrimination statutes)
            - Discussion of possible test outcomes (i.e., positive, negative, variant of uncertain significance)
            - Explanation of potential benefits, risks, and limitations of testing
            - Explanation of purpose of evaluation (e.g., to confirm, diagnose, or exclude genetic condition)
            - Identification of medical management issues, including available prevention, surveillance, and treatment options and their implications
            - Obtaining informed consent for genetic test

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Limits or Restrictions

1. The collection of blood samples for genetic testing must comply with the law of the PR Department of Health where it states that the sampling must be performed by the personnel of a Clinical or Reference laboratory licensed by the department of health, CLIA and CNC certified in good standing or if the doctor's office complies with all requirements established by law obtaining certification for testing in the medical office if apply in this type of case.
2. Clinical laboratory tests processed outside of Puerto Rico are not considered diagnostic tests covered by the Government Health Plan (Medicaid) according to annex #7.5.4.2 of the contract (7.5.4.2.2).
3. NIPT is limited to one per pregnancy. It requires a Pre Service Authorization from the MSO. The MSO shall not be responsible for payment in the absence of the Prior Authorization.
4. The MSO does not consider the NIPT as medically necessary when its only to know the gender of the fetus.
5. The MSO does not consider the NIPT as medically necessary when performed prior to 10 weeks of gestation.
6. Cell-free fetal DNA-based prenatal screening for fetal aneuploidy (trisomy 13, 18, 21) is considered not medically necessary for diagnosis of aneuploidy, if evidence is insufficient, conflicting, or poor and demonstrates an incomplete assessment of net benefit vs harm; additional research is recommended. Due to the possibility of false-positive results with cell-free DNA testing, confirmation of a diagnosis of aneuploidy should be made via amniocentesis.
7. Cell-free fetal DNA-based prenatal screening for fetal aneuploidy (trisomy 13, 18, 21) is considered not medically necessary for individuals not meeting the criteria above, including pregnancies involving 3 or more fetuses.
8. Cell-free fetal DNA-based prenatal screening for fetal aneuploidy (trisomy 13, 18, and 21) in twin pregnancies is considered not medically necessary when the current pregnancy is affected by fetal demise, vanishing twin, or one or more anomaly detected in one or both twins.

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Coding Reference

Diagnoses Codes

Medically Necessary Diagnosis Codes

Pregnant State

- Z33.1 - Pregnant state, incidental
- Z33.3 - Pregnant state, gestational carrier
- O09-09.A3 Supervision of High-Risk Pregnancy
- 035.1 – O3510X0 Maternal care for suspected chromosomal abnormality in fetus
- Q96 – Turner's syndrome
- Q96.3 Mosaicism, 45 X/46, XX or XY

Family History of congenital malformations

- Z82.79 Family history of other congenital malformations, deformations and chromosomal abnormalities

Weeks of Gestation must accompany any of the diagnoses codes listed above.

- Z3A.10 Weeks of gestation of pregnancy 10 weeks.
- Z3A.1 - Weeks of gestation of pregnancy, weeks 10-19
- Z3A.2 - Weeks of gestation of pregnancy, weeks 20-29
- Z3A.3 - Weeks of gestation of pregnancy, weeks 30-39
- Z3A.4 - Weeks of gestation of pregnancy, weeks 40 or greater

Non Medically Necessary Diagnosis Codes – Multiple Gestation (Twins, Triplets or greater)

- O30.001-O30.099
- O30.101-O30.93 -
- O31.00X0-O31.8X99
- O30.001-O30.099

Weeks of Gestation less than 10

- Z3A.0 - Weeks of gestation of pregnancy, unspecified or less than 10 weeks
- Z3A.00 - Weeks of gestation of pregnancy not specified]
- Z3A.01 - Less than 8 weeks gestation of pregnancy
- Z3A.08 - 8 weeks gestation of pregnancy
- Z3A.09 - 9 weeks gestation of pregnancy

CPT® Codes

- 0327U Fetal aneuploidy (trisomy 13, 18, and 21), DNA sequence analysis of selected regions using maternal plasma, algorithm reported as a risk score for each trisomy, includes sex reporting, if performed
- 81420 Fetal chromosomal aneuploidy (eg, trisomy 21, monosomy X) genomic sequence analysis panel, circulating cell-free fetal DNA in maternal blood, must include analysis of chromosomes 13, 18, and 21
- 81507 Fetal aneuploidy (trisomy 21, 18, and 13) DNA sequence analysis of selected regions using maternal plasma, algorithm reported as a risk score for each trisomy

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Reference Information

- Norm and Regulation of the PR Secretary of Health #7189 (August 4, 2006) to regulate the establishment and operation of clinical analysis laboratories, plasmapheresis, anatomical pathology laboratories and blood banks in PR. Fifth article, pages 4 and 5.
- ASES contract, Section 7.5.4.2.2 Diagnostic Tests services not considered covered under the GHP (Clinical Labs Processed outside of PR).
- National library of Medicine (MedlinePlus)- Prenatal Cell-Free DNA Screening. Available at: https://medlineplus.gov/lab-tests/prenatal-cell-free-dna-screening/ Accessed on May 12,2023
- MCG Health Ambulatory Care 26th Edition- ACG: A-0724 (AC)
- American College of Obstetricians and Gynecologists (ACOG). Practice Advisory: Cell-free DNA to Screen for Single-Gene Disorders. Available at: https://www.acog.org/clinical/clinical-guidance/practice-advisory/articles/2019/02/cell-free-dna-to-screen-for-single-gene-disorders. Accessed on May 12, 2023
- American College of Obstetricians and Gynecologists (ACOG). Practice Bulletin Num 226, Oct 2020: Screening for Fetal Chromosomal Abnormalities. Available at: https://www.acog.org/clinical/clinical-guidance/practice-bulletin/articles/2020/10/screening-for-fetal-chromosomal-abnormalities Accessed on May 12,2023
- National Society of Genetic Counselors. Position Statement. Prenatal cell-free DNA screening. 2021. Updated April 23, 2021. Available at : **https://www.nsgc.org/Policy-Research-and-Publications/Position-Statements/Position-Statements/Post/prenatal-cell-free-dna-screening-1** Accessed on May 12,2023

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Policy History

05/12/2023	Policy Drafted	New Medical Policy
5/23/2023	Policy Draft	▪ Title Modified to Non-Invasive Prenatal Genetic Tests for Fetal Aneuploids ▪ MPCC Approved sending draft policy per ASES request
7/31/2023	Final Policy	▪ Number updated to reflect approval status.